UNIVERSITY OF MINNESOTA COMPUTER CENTER
Deadstart Systems Newsletter

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Send all comments, criticisms and contributions to the editor: T.W. Lanzatella
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NOTICE OF CHANGES TO THE SYSTEM

KRONOS Changes

Bob Williams altered the default value of NF (number of local files) in the VALIDUZ file by increasing the value to 16 from 14. This change was precipitated by the installation of MANTRAP which requires additional local files. This change affects 6400 accounting only since Cyber user numbers are set up in a different manner.

Bill Wells repaired an obscure bug in NOTICE which caused an erroneous message to be sent to a subordinate user if a master user had previously disabled the subordinate user.

Tim Hoffmann completed an extensive enhancement to DSDI, the deadstart dump interpreter.

1. Local changes to low core words and to control point area words have been fully incorporated.

2. The ANALYZE TRT verification feature was added to DSDI.

3. The ANALYZE B-display enhancement was added to DSDI.

Marisa Riviere repaired an error in CALLPRG which had previously been checking the last access time rather than the creation time to determine whether a file should be purged.

Since the 808 has finally been removed, Kevin Matthews removed his feature which caused medium sized rollout files to be placed on the 808.

NOS Changes

Over the past two weeks the local NOS system has proceeded through two iterations. The volume of code being installed precludes a lengthy explanation here of each change. I will however, mention each modset installed by name, give a brief explanation of its purpose, and indicate who installed the modification. New modsets will receive their customary explanation or the reader will be referred to a proposal covering the modset.

All code which is introduced to the operating system must flow through the code review process. Code review has become a ritual at Lauderdale in which modsets are reviewed for legitimate purpose and syntactic clarity. One tacit goal of the conversion process is to weed out modifications which have doubtful purpose. The NOS JPL should be about 15000 lines shorter than the KRONOS JPL. Code review during the conversion process provides a convenient method of singling out needless modsets which should be discarded. But modsets cannot usually be discarded without systems group approval. In most instances this can only be done with a proposal. Many modsets which we want to discard are not important enough to propose. Hence, I shall identify here all modsets which we want to discard but which should be discussed before the systems group. We may decide that some modsets will require lengthy study before we can discard them but most can fade away with very little discussion. These modsets will be explicitly mentioned so as not to be confused with another class of modifications which are being discarded. The latter class of modsets are modifications which repair bugs which have subsequently been repaired by CDC or which install features so obscure and useless as to be an embarrassment.

The following changes comprised the NOS AC system.

Tim Salo installed the following changes.

a. Tim introduced a new modset GENSSE which generalizes installation words in the system sector.

b. Tim introduced source versions of the following programs for MPLNOS: LOADPDP, PDP, COMPDV5, 1SA, 1SU, COMSSIO, 1SB, 1RF, 2SU, SUPIO1 and SUPIO.

Tim Hoffmann delivered the following modsets.

a. GENCPM, a mod to generalize CPM functions.

b. GENSOB, a mod which defines the SOBW word in the control point area.

c. GEN006, a mod to CONTROL which raised the origin to make room for additional entry points.

d. CALORD, a mod which changes the search order for procedure files to local files, permanent files and finally system.

e. CONTU1, the mod which installs the PRINT command.

f. CTLID, the mod which installs the KCL ID function.

g. CTLLIT, the mod which installs the KCL LIT function.

h. CTLZ, the mod which installs the KCL Z control statement.

i. DATIME, the mod which installs the KCL mnemonics PD and PT.

j. CTLARG, a mod which enforces the correct number of arguments on CONTROL statements.

k. CATALF, the mod which alphabetizes the CATLIST report. This mod also installs the CATLIST SC/CH parameters and percentage full on the CATLIST report.

l. CATBR, the mod which installs the CATLIST BR parameter.

m. CATFN, a mod which corrects the CATLIST report if FN=XXX, NA is specified and XXX is not present.

n. CATMSG, a mod which removes colons from the CATLIST report.

o. DOBIE, a mod which causes CATALOG output buffer to be dumped after an error. The mod was altered to use the new flush bit.

p. NOCOL, a mod which causes CATALOG to use COMCZTB rather than COMCSFN.

q. EBRIEF, a mod which shortens the ENQUIRE report if in BRIEF mode.

r. DSKUTI, the mod which alters PFM to provide percentage full on a CATLIST request.

s. MSPACK, a mod which prohibits PACKing a non-mass storage file.

t. GOFO, the mod which installs the KCL GOFO command.

u. DMPI, the mod which installs the DMPI command to trigger interactive CPMEM dumps.

v. PFILE, the modset which installs the KCL PFILE function.

w. ROLTIM, the mod which installs a time parameter on the ROLLOUT command.

Tim introduced the following MPL decks: COMCCND, COMCGST, COMCPZO, COMSFET, COMCUPS.

Brian Hanson installed the following modsets.

a. LCKNDP, the mod which disallows PACKing, SORTing or RESEQing of LOCKed files.

b. NODRP, the mod which installs NODROP.

c. NAMES, the mod which installs the abbreviations CBF, CBR, CCF, CCR and CS.

d. PRIME, a mod which allows LOCKing and UNLOCKing of primary files.

e. OVLMOD, the mod which allows subcontrol point loads.

f. ULBED1, the mod which installs the LIBEDIT E parameter.

g. ULBED2, the mod which installs the LIBEDIT */ comment directive.

h. ULBED3, the mod which installs the LIBEDIT NR parameter.

i. LSTLWA, a mod to CATALOG which includes HHA or LWAS in the CATALOG report.

The following changes comprise the NOS AD system.

Tom Lanzatella delivered the following changes.

a. ARGS10, a mod which permits a = sign as equivalence when processing local file program calls.

b. CARGU1, a mod which provides a conditional assembly option to specify the maximum number of characters per argument in COMCARG.

c. CARGU2, a mod to disallow the = sign as a general separator if CARGDOH$ is defined at assembly time.

d. CHECSY, a mod which disallows calls to certain programs if non SYOT.

e. CMACU1, a mod to correct calls generated by certain macros in COMCMAC.

f. CUPCU1, a mod which provides a conditional assembly option to specify the maximum number of characters per argument in COMCUPC.

g. FRSTTK, a mod which ensures that COMPSEI returns properly if empty first track.

h. GENLFM, a mod which generalizes LFM functions.

i. GNLFME, a mod which generalizes LFM error messages.

j. MDFYJ, the mod which installs the MODIFY J parameter.

k. MINROL, a mod which limits manually invoked rollout time to ten seconds or more.

l. MODECS, a mod which makes MODIFY pass FLX to COMPASS if an automatic COMPASS call had been specified.

m. MODIU1, the mod which installs 0 as an abbreviation for OPLFILE in MODIFY.

n. MODIU2, a mod which repairs a mode 1 error in MODIFY if UPDATE is the only directive specified.

o. ISFONE, a mod to ISF which helps to ensure that a proper date had been entered at deadstart.

p. ABTMSG, the mod which installs verbose explanations of mode errors into 1AJ.

q. BLKDEK, a mod to BLANK which causes BLANK to EVICT rather than RETURN the assigned tape.

r. BLNKFI, a mod which installs the FI parameter into the BLANK command.

s. CDC001, a mod which corrects a file type check in 1DS.

t. DISKP, a mod to DIS which alters the way skip-to-exit works under DIS.

u. DISU1, the mod which adds the ROL command to DIS.

v. DMPOD, the mod to 1AJ which causes an exchange package dump if a job is dropped by the operator.

w. FILESA, a mod which turns off statement echo to TXOT users.

x. GETVSN, the mod which installs the GETVSN macro into COMCMAC.

y. ISFPJ, the mod which installs the ISF P and J parameters. This mod also installs the CMRDECK entry SID=.

z. ISFTLK, a mod which adds TALK as a fast attach file.

Tom installed a new source version of COMCCSO (used by modset CHECSY).

Tom also announced that the following modsets will not be converted to NOS.

a. ABTIMS, a mod to abort IMS if called from non-SYOT. This check was added to CHECSY.

b. ACTIVE, a mod to correct MAGNET INACTIVE on DSD displays. This was repaired by JJD in a new modset.

c. CPCODE, a mod to repair dumb code generation in CPCOM. This bug was repaired by CDC.

d. CPRIME, a mod to create a primary file in LFM if one does not already exist. Taken from NOS originally.

e. DDPCH, a mod to define the DDP channel. This code was moved to a new modset by KCM, 6DP001.

f. DISADV, a mod to repair a 1AJ bug under DIS. CDC fixed this error.

g. DISCAL, a mod to DIS to correct PP calls under DIS. CDC fixed this error.

h. ELSRUN, a mod to allow ELS/ENS under DIS while a program is running. CDC fixed this problem.

i. FETLTH, a mod to enforce FET length on STATUS requests. CDC fixed this problem.

j. GEN010, a mod to increase space in 1AJ. CDC recovered some space making this modset unnecessary.

k. GTR9, a mod to GTR which checks for record name length in excess of 7 characters, a CDC modset to begin with.

l. ISFU1, a mod to make ISF run at priority 50. CDC altered ISF to run at a high priority.

m. LEVEL13, a mod installed to repair a branch error in 1RO when we converted to level 13 KRONOS (PSR 439).

n. LFMU1, a mod to LFM which ensures that function 12 never returns a zero status for an existing file.

Kevin Matthews installed two new modsets.

a. 6DP001, a mod to create more space in 6DP, the DDP driver. The mod adds a new device driver 7SP which sets up DDP channel for 6DP.

b. SET001, a mod to create more space in SET. The mod deletes code for unsupported mass storage equipment types.

Tim Salo installed a new modset TID which begins to implement Tim's proposed use of Terminal ID's (see DSN 4, 1 p. 3). Tim also installed new source versions of the following programs: 1SU, SUPIO, KIL, HOLD and COMSSIO.

Tim Hoffmann installed a new version of CTLZ, a mod to CONTROL which installs the KCL Z command. Tim also installed the modset ENQMOD, a mod which installs nearly all local features to ENQUIRE which are externally visible.

Tim announced that the following modsets will not be converted.

a. CATAL2, a mod to correct CATALOG checking of text type record length. CDC fixed this error.

b. CATAL4, a mod to correct CATALOG checking of LDSET tables. CDC fixed this error.

c. CATLU1, a mod to install the CATLIST BR option. This code was added to CATALF.

d. CATLU5, a mod to ensure a zero terminator at end of CATLIST argument table. This code was added to CATALF.

e. CATLU7, a mod to install the CATLIST SC and CH parameters. This code was added to CATALF.

f. CPMSOB, a mod to define a CPUMTR resident CPM function for SOB. This code was added to GENSOB.

g. DSDMOD, a mod installing descriptive changes to DSDI. This code has been reworked and will be reintroduced in another modset.

h. LIBNUM, a mod to include library numbers in the CATALOG report. CDC added this feature.

i. PROSEQ, a mod to secure core in PROFILE. This will be done using CDC secure memory feature.

Brian Hanson converted the following modsets.

a. RECTYP, the mod which installs the record types DUMP and USER.

b. NOREF, a mod to ensure that the output buffer is always dumped after certain copy operations.

c. LDREL, a mod to correct LDR treatment of sub control point loads.

d. LDRMES, a mod to generalize error processing in LDR.

e. LDRNAM, a mod to allow LDR to load by name.

f. LOADBK, a mod which allows LINK to run as default loader.

g. NODRP, the mod which installs NODROP.

h. LIBFL, a mod which allows LIBEDIT to handle its own field length.

Jeff Drummond installed the following modsets.

a. GNDSD1, GNDSD2, GNDSD3, GNDSD4 and GNDSD5. Five new generalization mods for DSD.

b. DSDB, the mod which installs our local B-display.

c. DSDFIN, the mod which installs the DSD FIND command. The feature has been enhanced so that jobs at control points are found also.

d. DSDH, a mod which installs the local two letter queue mnemonics to be used in the H-display.

e. DSDLCK, a mod which causes certain DSD commands to be entered into the error log and require UNLOCK status for others. This mod also disallows entering display code directly into memory.

f. DSDMSG, the mod which installs the LOGOFF and DIAL,ALL commands.

g. DSDONE, the mod which allows display selection with a single letter.

h. DSDPHG, a mod which causes the HUNG PP message to be intensified.

i. DSDSEQ, the mod which installs the SEQ command.

j. DSDSYN, a mod to straighten out DSD overlay lengths.

k. DSDT, a mod which installs local enhancements to the DSD T-display.

l. DSDU, the mod which installs the local U-display.

m. DSDUDT, the mod which installs the local E,U display which displays MAGNET UDT tables.

Jeff also introduced a new source version of the MPL common deck COMSPIM.

Jeff announced that the following modsets will not be converted to NOS.

a. ADDSSR, a mod to make the subroutine SSR in COMPUSS a separate common deck.

b. CMEM10, a bug fix to CPMEM. CDC fixed the error.

c. CORSAV, a mod to save core in DSD. The same code was installed in a different modset.

d. CPRITE, a mod to remove the dumb copywrite message from deadstart display. This was removed elsewhere.

e. DSDDLR, a mod which allows dollar signs to be displayed on the K-display. This feature is no longer needed.

f. DSDS, a mod which allows paging the S-display. We won't add so many origins that this display will have to be paged.

g. DSDS1, similar to DSDS.

h. DSDXMT, a mod to install enable/disable commands for XMIT/ECSXFER. These utilities will be installed in a different fashion.

i. GEN009, GEN012, GEN013; mods to generalize DSD. This code was installed in GNDSD1-GNDSD5.

j. HOURUP, a mod which moved hour update code into 1DU from DSD. CDC moved this code into MTR.

k. MESCLR, a mod to allow clearing of the TELEX message buffer. Code installed with new modset DSDMSG.

The following modsets install externally visible features and were flagged during code review as discard candidates.

a. CARGU1 - provide conditional assembly option specifying maximum number of characters per parameter in COMCARG.

b. CARGU2 - provide conditional assembly option disallowing = sign as general separator in COMCARG.

c. CUPCU1 - same as CARGU1 except pertains to COMCUPC.

d. MINROL - a mod which limits rollout time to 10 seconds or more.

e. DMPOD - a mod which causes exchange package dump if a job is operator dropped.

f. NODROP - a general displeasure over the method of using CDC file ID's.

PROPOSED CHANGES TO THE SYSTEM

Bam, Powie, and Zap - by T.J. Hoffmann

The COMCZAP deck as released from CDC contains a FILEB and several EQU's and ORG's in order to create a proper FET for its use.

The main disadvantage to this is the fact that FILEB uses DATA statements to reserve storage. This precludes its use in preset code residing in blank common.

To alleviate this problem I propose to replace the FET definition code with a set of CON statements (ala PZO) which will assemble anywhere.

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Four Proposals - by J.J. Drummond

I would like to propose the following changes to the NOS system:

1. Install a *BR* parameter to CATALOG, similar to the one in effect for CATLIST. The parameter would suppress all headers.

2. Install a check in CATALOG for a nonexistant file that would cause the message *FILE NOT FOUND.* to be issued if one attempted to catalog a nonexistant file.

3. Implement the NOS RWF (rewind all files), RTF (return all files) and ULF (unload all files). These routines appear on the NOS release deadstart tape, but the source for them is not included. I would like to make these routines available under NOS with the following enhancements:

   A. Implement a parameter list (similar to our current CLEAR control statement) such that any file specified in the parameter list would not be rewound/returned/unloaded.

B. Put these new routines in a separate deck, and remove CLEAR from PFILES and put it in with them, since CLEAR is practically identical to RTF (the only difference being what is done with the user's primary file).

4. Implement the current SUPIO *R* display as the *V* display under NOS. This is to preserve the stock CDC *R* display for (EI200). I feel we should not eliminate stock CDC subsystems out of hand.

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Eliminate Buffer Point Numbers from BATCHIO Commands - by D.W. Mears

Each BATCHIO equipment has two numbers associated with it: the EST ordinal and the BATCHIO assigned buffer point number. The account file and error log messages refer to the EST ordinal. Some console commands use EST ordinal as an argument (TRAIN, LP, LO, LR, etc.) and some use the buffer point number as an argument (BKSP, SKIP, END, etc.). This situation will become even more confusing when the Decwriter is used as a console because the DSDI display (the only place the buffer points are listed) will not be immediately available at the Decwriter.

I want to change all the BATCHIO commands to reference EST ordinal to eliminate this confusion. John Sell says that he would be glad to see this change made.

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The Red Herring Proposal - by J.J. Drummond

I would like to propose eliminating the PL parameter from PFILES and CATLIST. This is for the following reasons:

1. The PL parameter is only useful to Systems people.

2. Adds extra code to PFILES and CATLIST.

As an alternative, a LB parameter could be added that would be equivalent to UN=LIBRARY. This new parameter would avoid the two major problems of PL as follows:

1. The LB parameter would be generally useful to all users--not just Systems staff.

2. The LB parameter could be implemented by a one word addition to the argument table, as opposed to the relatively complicated processing required for PL.

SYSTEM MAINTENANCE: People and Procedures

Last Week's Systems Group Meeting - by T.W. Lanzatella

1. Our meeting began with a field trip to the UCC terminal room at Lauderdale. There, Don Mears demonstrated a GE TELENET 1232, a 1200 baud hard copy terminal. UCC will be field testing several 1200 baud hard copy terminals in the near future.

2. The following proposals were rejected or accepted.

   a. Marisa Riviere's proposal to add a scroll option to WRITEUP (see DSN 4, 1 p. 3) was approved. We decided that the default number of lines comprising a page should be 23. We also decided that specifying SR alone on the WRITEUP command (after the slash) would invoke scrolling.

b. Marisa's other WRITEUP proposal suggested that no fancy interrupt processing be installed into WRITEUP because of the large amount of data lost after each interrupt. We decided instead that all interrupt processing in WRITEUP be removed and that an alternate mechanism be used to ensure that all files are returned after an interrupt. This means that WRITEUP can still be interrupted but that interrupt control is handled by TELEX/1TD. This minimizes the amount of lost data after each interrupt.

c. Jeff Drummond's proposal to move RETAIN and ACQUIRE out of PFILES into another package was defeated. The argument against removal was that RETAIN and ACQUIRE (A) are heavily used and are very popular. Additionally, we observed that the total amount of code in PFILES to handle RETAIN and ACQUIRE is very small. Also, Jeff's proposal to remove the WB and PG options from PFILES was rejected except for removal of PG (see DSN 4, 2 p. 10). The PG option is used on the DEFINE command to purge the specified file before the define takes place. Only a couple staff members knew about the parameter and it is not documented anywhere.

d. Jeff Drummond's proposal to standardize all control statement abbreviations was defeated (see DSN 4, 2 p. 10). We did, however, seriously consider removing all abbreviations entirely. This amounted to nothing other than a discussion topic.

e. T.W. Lanzatella's proposal to choose a new abbreviation for COPYSBF was defeated (see DSN 4, 2 p. 11). We decided to remove the name CS entirely. We will alter CS processing so that users get a warning that CS will be removed when NOS is installed.

3. Larry Liddiard spent the remainder of the meeting discussing the following topics.

a. Notes from the recent VIM conference were reviewed. A copy of these notes will be circulated among staff members.

b. Due to problems with our order for Vadic 1200 baud modems, UCC will be supporting a 2 line Vadic rotary and a 3 line Bell rotary instead of a 3 line Vadic rotary and a 2 line Bell rotary.

c. Regarding the storage shelves currently located in the Lauderdale users' room, one row will be removed (about half) and 24 new, enclosed shelves will replace the remaining shelves. Additionally, the rate charges for storage space will be doubled.

d. News on new offices at Lauderdale: the current conference room will be converted into offices while a new room constructed in the northwest corner of the user area will be the conference room. We are not yet certain about who will be moving to Lauderdale.

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Callprg and Library Tape News - by M. Riviere

On February 14, Bart Johnson will be introducing a future version of PLOT31 as a Callprg package.

The next Callprg Index and Library Tape changes will be taking place on February 28. Modifications for that date should be requested by February 23 at noon.

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A Short Note - by K.C. Matthews

As reported in number 3 of the Enhancement Newsletter, we have proposed an Extended File Name Table (EFNT) in order to implement some of our multi-mainframe plans. I am currently drafting a sort of IMS which will serve to describe the project and to formalize the ideas into a real proposal. This should appear in the next DSN. The basic idea can be gleaned from a memo from the MMF task force to the steering committee. A copy of this memo can be obtained from me if you are interested.

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Decwriter Project - by D.W. Mears

Operations will need some kind of operators' console in the new I/O area at Lauderdale. This will be provided by the Decwriter which is connected to the plotter PDP11.

The DW EST entry will define the status of the Decwriter. The following things will occur if DW is on and in the EST:

1. 1BA and 1IO will copy all BATCHIO account file and error log messages to the Decwriter.

2. 1IO will periodically copy the buffer point information to the PDP11.

3. 1IO will periodically look for and process commands from the PDP11.

The following DSD BATCHIO commands will be available from the Decwriter.

BKSPXX,YY.	SKIPXX,YY.
BKSPRUXX,YY.	SKIPFXX,YY.
BKSPFXX,YY.	SKIPRXX,YY.
CONTINUEXX.	SKIPRUXX,YY.
ENDXX,YY.	SUPPRESSXX.
REPEATXX,YY.	TRAINXX,YY.
RERUNXX,YY.	OFFXX.
STOPXX.	ONXX.

The following commands will be available to make the Decwriter look like an IMPORT station (as requested by operators):

RPT,YY,XX	(same as BKSPRU)
RTN,XX	(same as RERUN)
WAIT,XX	(same as STOP)
GO,XX	(same as CONTINUE or ON)
STAT	(returns status of jobs from BC)
STAT,jobname	(returns status of job jobname)
TERM,XX	(same as ENDXX)
WEOJ,XX	(same as OFFXX)

The following commands are available to control the PDP11.

RESTART.	Reinitializes the PDP11
PMD.	Starts a postmortum dump
LOAD.	Sets up the PDP11 for a load

The PDP11 program will convert the dayfile messages from display code to ASCII and print them on the Decwriter. Once a second, the PDP11 program will compare the current buffer point information to the previous buffer point information. When the jobname or status of an equipment changes, a message similar to a line from the DSD I display will be printed on the Decwriter. All messages printed on the Decwriter will be prefixed by the time of day.

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Cyber 74 Deadstart Dump Analysis - by K.C. Matthews

From Sunday, 22 January through Sunday 6 February

24 January

10:28 (DD-2)
The scopes went blank. A chair may have bumped the console before this one. Analysis revealed that DSD had executed some data, in which was a central write (CWM) instruction. This caused a lot of CM to be wrecked.

25 January

11:38 (DD-3)
The old chair against the console trick again. This time MTR, not DSD, was written over lots of core. MTR seems to have been executing code (at least it wasn't data) where it shouldn't have been.

2 February

14:43 (DD-4)
1CD hung trying to drop channel 1 (the 512 printer channel). Attempts were made to keep the system running so that a long listing would not have to be restarted. This caused several other things to get messed up.

3 February

10:23 (DD-5)
1TO appeared hung. The dump revealed large portions of core zeroed out. There were also parity errors during the dump. I can't determine if core was really zero or not.

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6400 Deadstart Dump Analysis (1/23-2/5) - by R.A. Williams

Date	Description	Tape
770203	The system hung with scopes flashing garbage. The dump was of no help since all PP's were full of memory test data. We feel that the dump was taken following a partial deadstart.	N.A.